

REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Simplot Phosphates, LLC
Vernal Phosphate Mine
M/047/0007

November 25, 2014

(responses (review actions) updated January 27, 2015)

General Comments:

Comment #	Sheet/Page/Map/Table #	Comments	Initials	
1	General	The Division may have additional comments based on the responses to the issues raised in this review. For example, the Division anticipates receiving the Geomechanical report. It is not clear if a variance is needed as there is no discussion regarding maximum slope angles in the current text. There are comments below regarding the request for a variance, but there are no clear statements regarding slope angles and stability to indicate whether a variance is actually needed.	lah	Specific issues raised in this general comment are addressed documentation. As discussed during the December 18, 2014 meeting, the Division will seek a variance. As the revisions.
2	Appendix F	Please include a copy of the approval from the Division of Water Rights for the tailings storage facility (TSF).	Lah	Copy of approval letter has been added to Appendix F.

R647-4-101 – Filing Requirements and Review Procedures

Comment #	Sheet/Page/Map/Table #	Comments	Initials	
3	General	This submittal represents an update to the existing NOI as well as a 585-acre expansion. It is likely this will be considered a revision with a requirement for public notice.	Aa	No action needed.

R647-4-105 - Maps, Drawings & Photographs

General Map Comments

Comment #	Sheet/Page/Map/Table #	Comments	Initials	
4	Base Map	Most of the maps are either printed on 8½" x 11" or 11" x 17" sheets. Given the size of the project, most of the maps should be 24" x 36" or similar size to show enough detail and relationship from one site to another.	whw	As discussed with DOGM in the December 18, 2014, Simplot's maps should be enlarged, Simplot would specify which maps should be enlarged, Simplot would specify which maps should be enlarged, Simplot would specify which maps should be enlarged.
5	Base Maps	Please clearly show the boundaries of the disturbed area. This is defined in the rules the surface land disturbed by mining operations.	whw	Figures 3a through 3d show property boundary, disturbed areas, and areas shown.
6	Base Maps	Please indicate those areas that are currently bonded, those areas where partial and full bond release have occurred, and approximate dates when bond release occurred.	whw	Figures 3a through 3d show fully released, reclaimed but not released areas.
7	Figure 3A	The legend symbols for "2013 Fully Reclaimed" and "Previously Reclaimed, Not Released" are too similar and cannot be easily distinguished on the map. Please change one of the symbols.	aa	The legend symbol for "Previously Reclaimed, Not Released" is too similar to the "2013 Fully Reclaimed" symbol.
8	Figure 3B	Same comment as above.	aa	The legend symbol for "Previously Reclaimed, Not Released" is too similar to the "2013 Fully Reclaimed" symbol.

	Initials	Review Action
mit boundary in of topsoil	Aa	Figures 3a, b, and c have been updated to show topsoil stockpile locations; and locations have been given in Figure 3c for landfill, TSF, and water catchment pond.
r the TSF. The Division of Water ums may	Aa	The design document <i>Tailings Impoundment Expansion Design Drawings</i> . 1999 is included as Appendix L. Based on December 18, 2014 meeting with DOGM, it was recommended that several figures be added with cross-sections, however, after review of drawings, Simplot recommends including the entire package, thus we have created an appendix L rather than separate figures in Appendix A.
	Initials	Review Action
or in the text if any strips, electrical lls, boreholes and e proposed mining	whw	<p>Per Rule R647-4, 105.1 - Base Map</p> <p>A topographic base map (or maps) with appropriate contour intervals must be submitted with this notice. The scale should be approximately 1 inch = 2,000 feet (preferably a USGS 7.5 minute series or equivalent topographic map where available). The map(s) must show the location of lands to be affected in sufficient detail to allow measurement of the proposed area of surface disturbance. The following information shall be included:</p> <ol style="list-style-type: none"> 1. Property boundaries of surface ownership of all lands to be affected by the mining operations. The Division requests that mineral ownership boundaries be included. 2. Perennial streams, springs, and other bodies of water; roads, buildings, landing strips, electrical transmission lines, water wells, oil and gas pipelines, existing wells, boreholes or other existing structures within 500 feet of the proposed mining operations. 3. Proposed route of access from the nearest publicly maintained highway. The scale should be appropriate to show access. 4. Known areas previous affected by mining or exploration operations within the proposed disturbed area. <ul style="list-style-type: none"> • Simplot developed a series of figures using GIS to meet the intent of the requirement: Figure 2 illustrates property boundaries and land use and includes statement that land ownership represents both mineral and surface rights. • Figures 3a through 3d provides aerial photography with GIS overlays that show surface water (note these figures have been updated to reflect other DOGM comments), buildings, wells, roads, highways, previous affected mining operations including disturbed areas. • The base maps in Figures 3a and 3d are at 1 inch to 2,000 foot scale. • The topographic maps are presented as figures 4a and 4b for purpose of showing topography, other details are presented in Figures 3a through 3d. • Language has been added to the NOI regarding transmission lines, oil and gas pipelines, landing strips. See Figures 3a through 3d for paved, unpaved, slurry pipeline, and electric transmission lines (see Section 105.2 Surface Facilities Maps in NOI). <p>Road lines for paved and unpaved surfaces have been added to Figures 3a through 3d, and Figures 5a, 5b1 and 5b2. These represent current conditions. The reclamation map will illustrate roads that will remain after reclamation (Figure 13).</p>
The Division needs at type of	whw	
4-105.1.14 areas of responsible for	whw	Simplot is responsible for reclamation on its property, text has been added (see section 105.3, last sentence in NOI).

105.2 - Surface facilities map

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	
15	Fig. 5 a-b	The surface facilities map will be evaluated as part of the bond calculations. (No response needed.)	whw	No action needed.
16	Fig. 5 a-b	Please include all paved roads, all unpaved roads and pipelines on maps of the surface.	whw	Maps have been updated to reflect this (See Figures 3a through 3c).
17	Figure 5c	This figure was discussed in the text but not provided.	aa	Figure does not exist; reference to figure removed from text.

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	
18	Figure 8	Figure is hard to read due to the print size. In the next submittal please print on 11" x 17" or larger sheets. The southern boundary of the map could be clipped (along with associated stratigraphy).	lah	This figure has been updated and is in 11X17" size.
19	Figure 8	Include the structural data on the map. At a minimum include strike and dip (as noted in the text) and any other structural geologic features that apply, such as fold axis and secondary folds, faults and/or joint sets. Please use standard USGS symbols.	Lah	This map has been updated to reflect additional geologic information.
20	Figure 9	Please add color (at the proper transparency) to match Figure 8.	Lah	Figure 9 has been updated, though there are only two colors base map.
21	Figure 10	Please indicate the locations of haul roads and secondary roads.	aa	Figure 10 has been modified and broken into 3 figures (10a, 10b, 10c). Secondary roads will be within mine pits and are filled in (progresses) and are not illustrated in the figures.
22	Figure 10	There were two "Phase I" areas on the map. The second one farther to the east did not show the panel details for the 10-year mine plan.	Aa	A panel detail has been added as Figure 10b
23	Omission	Please include cross sections of slopes, roads and pads at time of reclamation.	Whw	Per discussion between DOGM and Simplot on December 18, 2014, cross sections and are presented as Figure 12 and 13; along with photographs

R647-4-106 – Operation Plan

106.3 – Estimated acreages disturbed, reclaimed, annually/sequentially

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	
24	Pg. 8	Paragraph 2 states that mining on the west side will continue through 2017 and refers to Figure 3c. Figure 3c does not show the mining sequence thru 2017. The figure should be updated in a similar fashion to Figure 10, so the west side mining sequence is clearer.	Aa	Mining sequence is illustrated in Figure 10c. Language has been updated.

106.7 – Existing vegetation – species and amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	
25	Appendix C	The vegetation report does not report average ground cover. It does provide a range for shrub cover and undergrowth cover for each of the three sites, but the average ground cover cannot be calculated from the data presented. Apparently, when data was collected for each major life form, there was no consideration for overlap. Please provide a summary sheet that shows the average ground cover (aerial	Lk	A summary sheet has been added to Appendix C that provides a

	Initials	Review Action
structural components of the structural geology is the differences.	Lah	Yes, structural geology is the same and language has been added to the text. Also, Figure 8 has been updated to reflect more detailed geologic information.
geologic formation consistency, please dstone.	aa	Text has been changed to provide consistency in terms.
existing on-site screened interval into a table format ons, and depth to the Groundwater modified to show the	aa	Table 6 in the NOI has been created that summarizes well information.
permit area, such as rent parts of the	aa	A figure (Figure 11) was developed that shows overburden estimates for the east side (west side is pretty much mined out so see no reason to include west side). In addition, a map (Figure 11) has been added that illustrates the ore thickness for the expansion area.

	Initials	Review Action
g approvals from F.	lah	Text has been inserted and the approval letter included in Appendix F. In addition, the design drawings are included in Appendix L.
public safety, R647-MSHA blasting	lah	Language has been added.

	Initials	Review Action
reek and references ter Discharge are sampled on a	aa	Text was revised to reflect surface water sampling associated with TSF.

	Initials	Review Action
d summary of permit area as well	Lk	Text was added that list mitigation activities by Simplot related to habitat improvement of sage grouse.

109.4 – Projected impacts on slope stability, erosion control, air quality, public health and safety

Comment #	Sheet/Page/Map/Table #	Comments	Initials	
34	Page 19 -20	More detail is needed in the text regarding the “roughened highwall surface slopes” for long term stability. The text should discuss actual maximum slope angles and specific design details.	lah	As discussed during the Simplot/DOGM meeting on December (summit to toe slope). Also, Figure 13 illustrates the mining se
35	Page 19-20	A few typos and syntax errors were noted in this section.	aa	This has been corrected.

R647-4-110 - Reclamation Plan

110.2 – Reclamation of roads, highwalls, slopes, impoundments, drainages, pits, piles, shafts, adits, etc

Comment #	Sheet/Page/Map/Table #	Comments	Initials	
36	Page 22	More detailed verbiage concerning slope angles is needed in the text to support the variance requested under section R647-4-112. (See detail comment under R647-4-112 below).	lah	As discussed during the Simplot/DOGM meeting on December
37	Pg. 23	The plan does not include a final reclamation plan for the TSF. The Division recognizes that concurrent reclamation is not feasible due to the continuous use of the tailings pond for the life of the mine, but the TSF has to be designed with an end point in mind and a reclamation plan. Please include a final plan showing the engineering details of the TSF closure plan.	aa	Closure plan drawings (preliminary) are included in Appendix
38	Omission	Similar to the TSF, there was no information provided on a final reclamation plan for the on-site landfill or the catchment pond.	Aa	For the landfill, closure and post closure care will be in accorda Language has been added to reflect this.
39	Omission	A post-mining storm water management plan for both the east and west side disturbance areas is required.	aa	Catchment pond would be part of TSF closure. Language has been added to the drainage and runoff control se
40	Omission	Please include maps and cross sections of highwall areas before, during, and after (reclaimed) operations.	whw	Figure 13 shows mining sequence and how highwall is formed additional language has been added to explain highwall reclamation

110.3 - Facilities to be left for post mining use (buildings, utilities, roads, pads, ponds, pits, equipment, etc.)

Comment #	Sheet/Page/Map/Table #	Comments	Initials	
41	Omission	Please show what roads will be left at the time of final reclamation. Please state how the pipeline will be reclaimed. The NOI does not include reclamation maps.	whw	A Reclamation map is presented in Figure 13, along with typica regarding pipeline.

110.5 - Revegetation planting program

Comment #	Sheet/Page/Map/Table #	Comments	Initials	
42	Page 26	The seed mix for reclamation should be adjusted. The Division recommends the following changes: Reduce the seeding rates for hypercrest wheatgrass from 2.0 pounds/acre (pure live seed, pls) to 0.5 pounds/acre (pls), Ladak alfalfa from 1.0 pounds/acre to 0.5 pounds/acre, and whistestem rubber rabbitbrush from 0.5	lk	Table has been modified it is the DOGM approved seed mix as

Initials	Review Action
Lk	This has been corrected.
Lk	Seed mixes have been removed from Appendix K

proving.)

Initials	Review Action
lah	No variance is being requested.
whw	No variance is being requested.
whw	No variance is being requested.

Initials	Review Action
aa	Noted; Refer to Appendix M.